NCDOT 2011 AADT & VC Segments Shapefile

The AADT & VC shapefile is a segment shapefile of Annual Average Daily Traffic (AADT) and Vehicle Class (VC) estimates. This data resource includes what was submitted to FHWA for Highway Performance Monitoring System (HPMS) for AADT and VC data reporting for 2011. We report AADT on all highways functionally classified (FC) above Local. A full coverage is provided for these routes where AADT segmentation is based on network configuration, travel patterns, and land use. Data is provided for ramps also. The ramp data is not a complete segment coverage but all major traffic flows at interchanges are reported. Where divided highways occur, the AADT total for both directions is referenced on the inventory direction. There are 28,835 AADT segments maintained (labeled "MAINT" in the SOURCE field) on 71,289 reference records. Most maintained traffic segments require multiple records for referencing.

Supplemental AADT are provided on the routes that are Local FC. These are not maintained in the maintenance table described above. A reference is generated through a spatial join between the monitoring station point and the LRS Arc it falls on. The extent of highway this AADT represents has not been determined. This process captures the AADT for Local routes into the published table without requiring a comprehensive maintenance process. The AADT on Local routes may extend beyond the arc used to report it. The user must exercise their own judgment in determining the limits of an AADT in this case (labeled "SUPP" in the SOURCE field). There are 17,500 records that are supplemented using this method, one record for each station captured.

VC data is provided for those segments where vehicle class data was collected. Truck volume data is collected at stations and the volumes are annualized. Truck percentages for Single Unit (SU) and Multi Unit (MU) trucks are generated from this data. The annualized truck percentages are applied to the 2011 AADT estimates to generate 2011 truck volume estimates. The truck percentage and volume estimates are provided in the shapefile. The class coverage is comprised of the primary route system and is still being developed. Some of the primary routes have not had VC data collected and will not have truck statistics available. None of the Local routes will have truck statistics.

The referencing provided is based on the 2012 Quarter 1 publication of the NCDOT Linear Referencing System (LRS) maintained by the GIS Unit. This is the official 2011 data set reported for HPMS routes, is the basis for the highway mileage reports, and was used to estimate vehicle miles of travel (VMT) for 2011. Some differences will be found when using other quarterly publications with this data set.

Traffic Survey Group
Transportation Planning Branch

Attribute Table Fields

The traffic data provided is seasonally factored to an estimate of an annual average of daily traffic. The statistics provided are:

Rte_Id: GIS 10 digit unique route identifier
Beg_Mp1: Route milepost at the beginning of the reference
End_Mp1: Route milepost at the end of the reference
G1FtSeg: LRS segment identifier
Beg_G1Fact: Percent of the LRS segment for the start of the reference
End_G1Fact: Percent of the LRS segment for the end of the reference
AADT2011: Estimated Annual Average Daily Traffic in vehicles per day for 2011
SOURCE: Process used to generate LRS references; MAINT are defined traffic segments maintained in the traffic reference table; SUPP are references generated by spatial join between monitoring stations on local routes and the LRS arc it falls on to supplement the maintenance data.
SU_PCT: Percent of AADT that are Single Unit Trucks (FHWA Class 4 – 7)
MU_PCT: Percent of AADT that are Multi Unit Trucks (FHWA Class 8 – 13)
SU2011: Estimated annual average daily single unit trucks in vehicles per day for 2011
MU2011: Estimated annual average daily multi unit trucks in vehicles per day for 2011
AADTT2011: Estimated annual average daily total trucks in vehicles per day for 2011

The segment location data are suitable for relating the AADT/VC data with other data by:

1. Spatial association using the arcs
2. Event association by using the Route/Mileposts
3. Event association using the LRS (G1) ID/Percentages

If additional information is needed, or an issue with the data is identified, please contact the Traffic Survey Group at (919) 661-5872.